



Express Mail Label
No. EV270265566US

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SEQUENCE LISTING

<110> PANTOLIANO, MICHAEL W.
RYAN, M. DOMINIC
STAKER, BART LEE
PRASAD, G. SRIDHAR
TANG, JIN
MENON, SAURABH PRABHAKAR
TOWLER, PAUL S.
WILLIAMS, DAVID H.
FISHER, MARTIN

<120> CRYSTAL STRUCTURE OF ANGIOTENSIN-CONVERTING ENZYME-RELATED
CARBOXYPEPTIDASE

<130> MNM/002

<140> 10/659,000
<141> 2003-09-09

<150> 60/410,010
<151> 2002-09-09

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<170> PatentIn Ver. 3.2

<210> 1
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<213> Artificial Sequence

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peptide

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<210> 2
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<223> Description of Artificial Sequence: Synthetic
peptide

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<210> 3
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<223> Description of Artificial Sequence: Synthetic peptide

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Asp Arg Val Tyr Ile His Pro Phe His
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<210> 4

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<212> PRT

<213> Homo sapiens

<400> 4

Ser	Thr	Ile	Glu	Glu	Gln	Ala	Lys	Thr	Phe	Leu	Asp	Lys	Phe	Asn	His	1	5	10	15
Glu	Ala	Glu	Asp	Leu	Phe	Tyr	Gln	Ser	Ser	Leu	Ala	Ser	Trp	Asn	Tyr	20	25	30	
Asn	Thr	Asn	Ile	Thr	Glu	Glu	Asn	Val	Gln	Asn	Met	Asn	Asn	Ala	Gly	35	40	45	
Asp	Lys	Trp	Ser	Ala	Phe	Leu	Lys	Glu	Gln	Ser	Thr	Leu	Ala	Gln	Met	50	55	60	
Tyr	Pro	Leu	Gln	Glu	Ile	Gln	Asn	Leu	Thr	Val	Lys	Leu	Gln	Leu	Gln	65	70	75	80
Ala	Leu	Gln	Gln	Asn	Gly	Ser	Ser	Val	Leu	Ser	Glu	Asp	Lys	Ser	Lys	85	90	95	
Arg	Leu	Asn	Thr	Ile	Leu	Asn	Thr	Met	Ser	Thr	Ile	Tyr	Ser	Thr	Gly	100	105	110	
Lys	Val	Cys	Asn	Pro	Asp	Asn	Pro	Gln	Glu	Cys	Leu	Leu	Leu	Glu	Pro	115	120	125	
Gly	Leu	Asn	Glu	Ile	Met	Ala	Asn	Ser	Leu	Asp	Tyr	Asn	Glu	Arg	Leu	130	135	140	
Trp	Ala	Trp	Glu	Ser	Trp	Arg	Ser	Glu	Val	Gly	Lys	Gln	Leu	Arg	Pro	145	150	155	160
Leu	Tyr	Glu	Glu	Tyr	Val	Val	Leu	Lys	Asn	Glu	Met	Ala	Arg	Ala	Asn	165	170	175	
His	Tyr	Glu	Asp	Tyr	Gly	Asp	Tyr	Trp	Arg	Gly	Asp	Tyr	Glu	Val	Asn	180	185	190	
Gly	Val	Asp	Gly	Tyr	Asp	Tyr	Ser	Arg	Gly	Gln	Leu	Ile	Glu	Asp	Val	195	200	205	
Glu	His	Thr	Phe	Glu	Glu	Ile	Lys	Pro	Leu	Tyr	Glu	His	Leu	His	Ala	210	215	220	

Tyr	Val	Arg	Ala	Lys	Leu	Met	Asn	Ala	Tyr	Pro	Ser	Tyr	Ile	Ser	Pro	225	230	235	240
Ile	Gly	Cys	Leu	Pro	Ala	His	Leu	Leu	Gly	Asp	Met	Trp	Gly	Arg	Phe	245	250	255	
Trp	Thr	Asn	Leu	Tyr	Ser	Leu	Thr	Val	Pro	Phe	Gly	Gln	Lys	Pro	Asn	260	265	270	
Ile	Asp	Val	Thr	Asp	Ala	Met	Val	Asp	Gln	Ala	Trp	Asp	Ala	Gln	Arg	275	280	285	
Ile	Phe	Lys	Glu	Ala	Glu	Lys	Phe	Phe	Val	Ser	Val	Gly	Leu	Pro	Asn	290	295	300	
Met	Thr	Gln	Gly	Phe	Trp	Glu	Asn	Ser	Met	Leu	Thr	Asp	Pro	Gly	Asn	305	310	315	320
Val	Gln	Lys	Ala	Val	Cys	His	Pro	Thr	Ala	Trp	Asp	Leu	Gly	Lys	Gly	325	330	335	
Asp	Phe	Arg	Ile	Leu	Met	Cys	Thr	Lys	Val	Thr	Met	Asp	Asp	Phe	Leu	340	345	350	
Thr	Ala	His	His	Glu	Met	Gly	His	Ile	Gln	Tyr	Asp	Met	Ala	Tyr	Ala	355	360	365	
Ala	Gln	Pro	Phe	Leu	Leu	Arg	Asn	Gly	Ala	Asn	Glu	Gly	Phe	His	Glu	370	375	380	
Ala	Val	Gly	Glu	Ile	Met	Ser	Leu	Ser	Ala	Ala	Thr	Pro	Lys	His	Leu	385	390	395	400
Lys	Ser	Ile	Gly	Leu	Leu	Ser	Pro	Asp	Phe	Gln	Glu	Asp	Asn	Glu	Thr	405	410	415	
Glu	Ile	Asn	Phe	Leu	Leu	Lys	Gln	Ala	Leu	Thr	Ile	Val	Gly	Thr	Leu	420	425	430	
Pro	Phe	Thr	Tyr	Met	Leu	Glu	Lys	Trp	Arg	Trp	Met	Val	Phe	Lys	Gly	435	440	445	
Glu	Ile	Pro	Lys	Asp	Gln	Trp	Met	Lys	Lys	Trp	Trp	Glu	Met	Lys	Arg	450	455	460	
Glu	Ile	Val	Gly	Val	Val	Glu	Pro	Val	Pro	His	Asp	Glu	Thr	Tyr	Cys	465	470	475	480
Asp	Pro	Ala	Ser	Leu	Phe	His	Val	Ser	Asn	Asp	Tyr	Ser	Phe	Ile	Arg	485	490	495	
Tyr	Tyr	Thr	Arg	Thr	Leu	Tyr	Gln	Phe	Gln	Phe	Gln	Glu	Ala	Leu	Cys	500	505	510	
Gln	Ala	Ala	Lys	His	Glu	Gly	Pro	Leu	His	Lys	Cys	Asp	Ile	Ser	Asn	515	520	525	

Ser Thr Glu Ala Gly Gln Lys Leu Phe Asn Met Leu Arg Leu Gly Lys
 530 535 540

Ser Glu Pro Trp Thr Leu Ala Leu Glu Asn Val Val Gly Ala Lys Asn
 545 550 555 560

Met Asn Val Arg Pro Leu Leu Asn Tyr Phe Glu Pro Leu Phe Thr Trp
 565 570 575

Leu Lys Asp Gln Asn Lys Asn Ser Phe Val Gly Trp Ser Thr Asp Trp
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Ser Pro Tyr
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<210> 5

<211> 587

<212> PRT

<213> Homo sapiens

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Asn Thr Asn Ile Thr Thr Glu Thr Ser Lys Ile Leu Leu Gln Lys Asn
 35 40 45

Met Gln Ile Ala Asn His Thr Leu Lys Tyr Gly Thr Gln Ala Arg Lys
 50 55 60

Phe Asp Val Asn Gln Leu Gln Asn Thr Thr Ile Lys Arg Ile Ile Lys
 65 70 75 80

Lys Val Gln Asp Leu Glu Arg Ala Ala Leu Pro Ala Gln Glu Leu Glu
 85 90 95

Glu Tyr Asn Lys Ile Leu Leu Asp Met Glu Thr Thr Tyr Ser Val Ala
 100 105 110

Thr Val Cys His Pro Asn Gly Ser Cys Leu Gln Leu Glu Pro Asp Leu
 115 120 125

Thr Asn Val Met Ala Thr Ser Arg Lys Tyr Glu Asp Leu Leu Trp Ala
 130 135 140

Trp Glu Gly Trp Arg Asp Lys Ala Gly Arg Ala Ile Leu Gln Phe Tyr
 145 150 155 160

Pro Lys Tyr Val Glu Leu Ile Asn Gln Ala Ala Arg Leu Asn Gly Tyr
 165 170 175

Val Asp Ala Gly Asp Ser Trp Arg Ser Met Tyr Glu Thr Pro Ser Leu
 180 185 190

Glu Gln Asp Leu Glu Arg Leu Phe Gln Glu Leu Gln Pro Leu Tyr Leu
 195 200 205
 Asn Leu His Ala Tyr Val Arg Arg Ala Leu His Arg His Tyr Gly Ala
 210 215 220
 Gln His Ile Asn Leu Glu Gly Pro Ile Pro Ala His Leu Leu Gly Asn
 225 230 235 240
 Met Trp Ala Gln Thr Trp Ser Asn Ile Tyr Asp Leu Val Val Pro Phe
 245 250 255
 Pro Ser Ala Pro Ser Met Asp Thr Thr Glu Ala Met Leu Lys Gln Gly
 260 265 270
 Trp Thr Pro Arg Arg Met Phe Lys Glu Ala Asp Asp Phe Phe Thr Ser
 275 280 285
 Leu Gly Leu Leu Pro Val Pro Pro Glu Phe Trp Asn Lys Ser Met Leu
 290 295 300
 Glu Lys Pro Thr Asp Gly Arg Glu Val Val Cys His Ala Ser Ala Trp
 305 310 315 320
 Asp Phe Tyr Asn Gly Lys Asp Phe Arg Ile Lys Gln Cys Thr Thr Val
 325 330 335
 Asn Leu Glu Asp Leu Val Val Ala His His Glu Met Gly His Ile Gln
 340 345 350
 Tyr Phe Met Gln Tyr Lys Asp Leu Pro Val Ala Leu Arg Glu Gly Ala
 355 360 365
 Asn Pro Gly Phe His Glu Ala Ile Gly Asp Val Leu Ala Leu Ser Val
 370 375 380
 Ser Thr Pro Lys His Leu His Ser Leu Asn Leu Leu Ser Ser Glu Gly
 385 390 395 400
 Gly Ser Asp Glu His Asp Ile Asn Phe Leu Met Lys Met Ala Leu Asp
 405 410 415
 Lys Ile Ala Phe Ile Pro Phe Ser Tyr Leu Val Asp Gln Trp Arg Trp
 420 425 430
 Arg Val Phe Asp Gly Ser Ile Thr Lys Glu Asn Tyr Asn Gln Glu Trp
 435 440 445
 Trp Ser Leu Arg Leu Lys Tyr Gln Gly Leu Cys Pro Pro Val Pro Arg
 450 455 460
 Thr Gln Gly Asp Phe Asp Pro Gly Ala Lys Phe His Ile Pro Ser Ser
 465 470 475 480
 Val Pro Tyr Ile Arg Tyr Phe Val Ser Phe Ile Ile Gln Phe Gln Phe
 485 490 495

His Glu Ala Leu Cys Gln Ala Ala Gly His Thr Gly Pro Leu His Lys
 500 505 510
 Cys Asp Ile Tyr Gln Ser Lys Glu Ala Gly Gln Arg Leu Ala Thr Ala
 515 520 525
 Met Lys Leu Gly Phe Ser Arg Pro Trp Pro Glu Ala Met Gln Leu Ile
 530 535 540
 Thr Gly Gln Pro Asn Met Ser Ala Ser Ala Met Leu Ser Tyr Phe Lys
 545 550 555 560
 Pro Leu Leu Asp Trp Leu Arg Thr Glu Asn Glu Leu His Gly Glu Lys
 565 570 575
 Leu Gly Trp Pro Gln Tyr Asn Trp Thr Pro Asn
 580 585

<210> 6
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 <212> PRT
 <213> Homo sapiens

<400> 6
 Val Thr Asp Glu Ala Glu Ala Ser Lys Phe Val Glu Glu Tyr Asp Arg
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 Asn Thr Asn Ile Thr Thr Glu Thr Ser Lys Ile Leu Leu Gln Lys Asn
 35 40 45
 Met Gln Ile Ala Asn His Thr Leu Lys Tyr Gly Thr Gln Ala Arg Lys
 50 55 60
 Phe Asp Val Asn Gln Leu Gln Asn Thr Thr Ile Lys Arg Ile Ile Lys
 65 70 75 80
 Lys Val Gln Asp Leu Glu Arg Ala Ala Leu Pro Ala Gln Glu Leu Glu
 85 90 95
 Glu Tyr Asn Lys Ile Leu Leu Asp Met Glu Thr Thr Tyr Ser Val Ala
 100 105 110
 Thr Val Cys His Pro Asn Gly Ser Cys Leu Gln Leu Glu Pro Asp Leu
 115 120 125
 Thr Asn Val Met Ala Thr Ser Arg Lys Tyr Glu Asp Leu Leu Trp Ala
 130 135 140
 Trp Glu Gly Trp Arg Asp Lys Ala Gly Arg Ala Ile Leu Gln Phe Tyr
 145 150 155 160
 Pro Lys Tyr Val Glu Leu Ile Asn Gln Ala Ala Arg Leu Asn Gly Tyr
 165 170 175

Val	Asp	Ala	Gly	Asp	Ser	Trp	Arg	Ser	Met	Tyr	Glu	Thr	Pro	Ser	Leu	180	185	190
Glu	Gln	Asp	Leu	Glu	Arg	Leu	Phe	Gln	Glu	Leu	Gln	Pro	Leu	Tyr	Leu	195	200	205
Asn	Leu	His	Ala	Tyr	Val	Arg	Arg	Ala	Leu	His	Arg	His	Tyr	Gly	Ala	210	215	220
Gln	His	Ile	Asn	Leu	Glu	Gly	Pro	Ile	Pro	Ala	His	Leu	Leu	Gly	Asn	225	230	235
Met	Trp	Ala	Gln	Thr	Trp	Ser	Asn	Ile	Tyr	Asp	Leu	Val	Val	Pro	Phe	245	250	255
Pro	Ser	Ala	Pro	Ser	Met	Asp	Thr	Thr	Glu	Ala	Met	Leu	Lys	Gln	Gly	260	265	270
Trp	Thr	Pro	Arg	Arg	Met	Phe	Lys	Glu	Ala	Asp	Asp	Phe	Phe	Thr	Ser	275	280	285
Leu	Gly	Leu	Leu	Pro	Val	Pro	Pro	Glu	Phe	Trp	Asn	Lys	Ser	Met	Leu	290	295	300
Glu	Lys	Pro	Thr	Asp	Gly	Arg	Glu	Val	Val	Cys	His	Ala	Ser	Ala	Trp	305	310	315
Asp	Phe	Tyr	Asn	Gly	Lys	Asp	Phe	Arg	Ile	Lys	Gln	Cys	Thr	Thr	Val	325	330	335
Asn	Leu	Glu	Asp	Leu	Val	Val	Ala	His	His	Glu	Met	Gly	His	Ile	Gln	340	345	350
Tyr	Phe	Met	Gln	Tyr	Lys	Asp	Leu	Pro	Val	Ala	Leu	Arg	Glu	Gly	Ala	355	360	365
Asn	Pro	Gly	Phe	His	Glu	Ala	Ile	Gly	Asp	Val	Leu	Ala	Leu	Ser	Val	370	375	380
Ser	Thr	Pro	Lys	His	Leu	His	Ser	Leu	Asn	Leu	Leu	Ser	Ser	Glu	Gly	385	390	395
Gly	Ser	Asp	Glu	His	Asp	Ile	Asn	Phe	Leu	Met	Lys	Met	Ala	Leu	Asp	405	410	415
Lys	Ile	Ala	Phe	Ile	Pro	Phe	Ser	Tyr	Leu	Val	Asp	Gln	Trp	Arg	Trp	420	425	430
Arg	Val	Phe	Asp	Gly	Ser	Ile	Thr	Lys	Glu	Asn	Tyr	Asn	Gln	Glu	Trp	435	440	445
Trp	Ser	Leu	Arg	Leu	Lys	Tyr	Gln	Gly	Leu	Cys	Pro	Pro	Val	Pro	Arg	450	455	460
Thr	Gln	Gly	Asp	Phe	Asp	Pro	Gly	Ala	Lys	Phe	His	Ile	Pro	Ser	Ser	465	470	475

Val	Pro	Tyr	Ile	Arg	Tyr	Phe	Val	Ser	Phe	Ile	Ile	Gln	Phe	Gln	Phe
				485					490					495	
His	Glu	Ala	Leu	Cys	Gln	Ala	Ala	Gly	His	Thr	Gly	Pro	Leu	His	Lys
			500					505					510		
Cys	Asp	Ile	Tyr	Gln	Ser	Lys	Glu	Ala	Gly	Gln	Arg	Leu	Ala	Thr	Ala
		515					520					525			
Met	Lys	Leu	Gly	Phe	Ser	Arg	Pro	Trp	Pro	Glu	Ala	Met	Gln	Leu	Ile
	530					535						540			
Thr	Gly	Gln	Pro	Asn	Met	Ser	Ala	Ser	Ala	Met	Leu	Ser	Tyr	Phe	Lys
545					550					555					560
Pro	Leu	Leu	Asp	Trp	Leu	Arg	Thr	Glu	Asn	Glu	Leu	His	Gly	Glu	Lys
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Leu	Gly	Trp	Pro	Gln	Tyr	Asn	Trp	Thr	Pro	Asn					
			580					585							

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<220>
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Tyr Gly Gly Phe Met
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<210> 10

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peptide

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Asp Arg Val Tyr Ile
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